

**REMARKS**

Claims 1-24 are pending in the application. Claims 1, 6, 10, and 13 have been amended. Support for the amendment can be found throughout the Specification, and in particular, paragraphs [0055-0057]; Figures 1, 4, 5, 6B; and the claims as originally filed. Claims 17-19 and 24 have been cancelled.

**Interview with Examiner**

Applicants thank the Examiner for the in-person interview granted on April 8, 2010 with Applicants' representatives, Nicole Einerson and Nancy Lambert. Applicants discussed Kellogg with the Examiner, and pointed out the force dynamics generated by the position of the input chambers relative to the process chambers. The Examiner discussed that a declaration would be necessary. The Applicants also discussed an amendment that would reflect that each process chamber of the plurality of process chambers would vary in radial distance to each interconnected input chamber of the plurality of input chambers.

**Double Patenting**

Claims 1-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 6,720,187. Applicants previously offered a terminal disclaimer to cure this rejection. The Examiner maintains the objection based on disapproval of the terminal disclaimer because "there are more than 10 practitioners listed on the POA." The Examiner requires a new POA and a new TD. First, Applicants request clarity regarding the specific USPTO guideline that references this rule. Second, Applicants respectfully submit that this application, including the previously submitted TD, are associated with Applicant's customer number, which maintains the list of practitioners associated with this application, including the undersigned.

**§ 112 Rejections**

Claims 1-24 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner objects to the use of "regular in the X and Y directions" as

unclear in its structural limitation. Applicants have amended claims 1, 6, 10, 13, and 17 to remove the language, and respectfully submit that the objection has been overcome.

### **§ 103 Rejections**

Claims 1-24 are rejected under 35 USC § 103(a) as being unpatentable over Kellogg et al. (US Patent No. 6143248) or EP 0693560. Applicants have amended independent claims 1, 6, 10, and 13 to recite a relationship between the input chamber and primary process chamber of each process chamber in which “each primary process chamber arranged in the circular arc varies in distance to each interconnected input chamber arranged in the rectilinear array of input chambers.”

Amended independent claims 1, 6, 10, and 13 each also claim a sample processing device including a plurality of process arrays, wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a *rectilinear grid array*. Further, independent claims 1, 6, 10, and 13 also claim that the input chambers of the plurality of process arrays are arranged in *rectilinear grid array*. In addition to failing to teach the rectilinear grid array of either the input chambers or output chambers, Kellogg et al. fails to teach or suggest the distance between the interconnected input chamber and primary process chamber as claimed by Applicants.

Kellogg et al. describe a centrifugal rotor having, *inter alia*, entry ports (A), fluid chambers (E), and overflow chambers (D) arranged in a circular arc on a circular disk. (Kellogg et al., col. 31, line 61; col. 32, line 46 to col. 33, line 61; Figure 12). In fact, it is noted in the Office Action mailed February 27, 2007 (and cited in the final Office Action dated October 15, 2007, at page 3, line 13), that “[t]he Office maintains *all of the elements* taught by Kellogg et al. are arranged in a circular arc around the disk axis as shown in figure 12.” (emphasis added). Applicants submit that this is an acknowledgment by the Office that Kellogg et al. do not teach output and input chambers of the process arrays of the plurality of process arrays that are arranged in a rectilinear grid array, or to vary the distance between the input and process chamber of each process array as recited in claims 1, 6, 10, and 13.

Kellogg provides no teaching as to the *arrangement* of elements of process arrays. Applicants maintain the position that Kellogg et al. fail to teach a sample processing device that includes input chambers and output chambers that are arranged in a rectilinear grid array, or to

vary the distance between the input and process chamber of each process array, as recited in claims 1, 6, 10, and 13. In addition, the Examiner has failed to identify a reason that one skilled in the art would be motivated to modify the elements of process arrays to form a rectilinear grid array or vary the distance between the input and process chamber of each process array as recited in claims 1, 6, 10, and 13.

The Examiner appears to equate the rectilinear parallel channels in Kellogg to the rectilinear grid of input chambers and/or output chambers as claimed by Applicants. However, this conclusion ignores the distinction that in Kellogg, the channels, while for the purposes of argument the channels are rectilinear relative to each other, the channels are still oriented along a substantially radial line. This distinction is important when considering the vector forces exerted on the fluid when rotating. Once skilled in the art would not be motivated to arrange the input or output chambers in the rectilinear grid array format as claimed by Applicants because such configuration increases the force necessary to move the fluid, as the fluid moves from the center of rotation. When the input and/or output chambers are arranged in a rectilinear array, or when the distance is varied between the input and process chamber of each process array, there is less force in the vector of desired movement of fluid, i.e., the fluid no longer moves radially from the center of rotation.

Claims 1-24 were also rejected under 35 U.S.C. § 103(a) as being obvious over EP 0693560. This rejection is respectfully traversed for similar reasons.

The test units of EP '560 include a single process array including chambers 50, 60, 62, 64 and 66 interconnected by channels in a "linear arrangement" so that "centrifugal force can be applied by the apparatus of Figs. 1-3 to properly sequence the flow of the liquid biological sample and liquid reagents through the test unit" (EP '560, col. 12, lines 37-42; Figures 4, 5, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, and 14A). Because of that arrangement of chambers of a process array provided on the test units of EP '560, it is submitted that EP '560 does not teach a sample processing device including a rectangular body and a plurality of process arrays *located within the body*, each of the process arrays including an input chamber, an output chamber, and a primary process chamber located between the input chamber and the output chamber, wherein the primary process chambers are arranged in a circular arc, and further wherein the sample processing device includes output chambers arranged in a rectilinear grid array and the input

chambers are arranged in a rectilinear grid array, or to vary the distance between the input and process chamber of each process array (claims 1, 6, 10, and 13). As discussed above, given the increase in force necessary to move the fluid away from the center of rotation in the rectilinear grid array of input chambers and/or output chambers as claimed by Applicants, the Examiner has failed to identify a reason that one skilled in the art would be motivated to modify the test units of EP '560 to (1) to include a plurality of process arrays located within the body, each of the process arrays including an input chamber, an output chamber, and a primary process chamber, or (2) arrange either the output chambers or the input chambers in a rectilinear grid array.

For at least the foregoing reasons, it is submitted that claims 1, 6, 10, and 17 are not obvious over Kellogg et al or EP '560. Thus, reconsideration and withdrawal of the rejections of claims 1-24 as obvious over either Kellogg or EP 0 693 560 is respectfully requested.

### **CONCLUSION**

In view of the remarks presented herein, Applicants respectfully submit that the claims are in condition for allowance. Applicants request that the Examiner telephone the undersigned agent of record in the event a telephone discussion would be helpful in advancing the prosecution of the present application.

Respectfully submitted,

July 14, 2010

Date

By: /Nancy M. Lambert/

Nancy M. Lambert, Registration No. 44,856

Telephone No.: 651-733-2180

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
Facsimile No.: 651-736-3833